

I claim:

1. A controller area network (CAN) module, comprising:

a plurality of sets of storage elements for storing a plurality of sets of data representing different states of the CAN module.

2. The CAN module according to claim 1, including:

a first CAN node;

a second CAN node; and

components whose state is represented by the sets of data stored in said sets of storage elements and are jointly utilized components that can be connected alternately to one of said first CAN node and to said second CAN node.

3. The CAN module according to claim 2, wherein said jointly utilized components are normally components whose capacity utilization is low.

4. The CAN module according to claim 2, wherein said jointly utilized components include a component which ensures that a CAN protocol is adhered to.

5. The CAN module according to claim 2, wherein said sets of storage elements contain a first storage element set and a second storage element set, and including a first multiplexer through which said components whose state is represented by the sets of data stored in said sets of storage elements can be connected to one of said first storage element set and said second storage element set.

6. The CAN module according to claim 5, including a second multiplexer connected to said first CAN node and said second CAN node, and through said second multiplexer, said jointly utilized components can be connected to one of said first CAN node and to said second CAN node.

7. The CAN module according to claim 6, wherein:

    said jointly utilized components whose state is represented by the sets of data stored in said sets of storage elements are connected to said first storage element set through said first multiplexer; and

    said jointly utilized components are connected to said first CAN node via said second multiplexer, if, on a part of said first CAN node, a request to access said jointly utilized components is present.

8. The CAN module according to claim 6, wherein:

said jointly utilized components whose state is represented by the sets of data stored in said sets of storage elements are connected to said second storage element set through said first multiplexer; and

said jointly utilized components of the CAN module are connected to said second CAN node through said second multiplexer, if, on a part of said second CAN node, a request to access said jointly utilized components of the CAN module is present.

9. The CAN module according to claim 2, wherein possible reactions of said jointly utilized components to requests on the part of said first CAN node and said second CAN node are determined in advance and buffer-stored until a relevant request occurs.

10. A controller area network (CAN) module for a microcontroller, the CAN module comprising:

storage elements for storing data representing different states of the CAN module.

11. The CAN module according to claim 10, including:

bit timing logic units, including a first bit timing logic unit and a second bit timing logic unit; and

a logic unit connected between said bit timing logic units and said storage elements, a state of said logic unit is represented by the data stored in said storage elements and said logic unit is a jointly utilized component that can be connected alternately to one of said first bit timing logic unit and to said second bit timing logic unit.

12. The CAN module according to claim 11, wherein said logic unit has a component which ensures that a CAN protocol is adhered to.

13. The CAN module according to claim 11, wherein said storage elements contain a first storage element and a second storage element, and including a first multiplexer connected between said storage elements and said logic unit, said first multiplexer selectively connecting said logic unit to one of said storage elements.

14. The CAN module according to claim 13, including a second multiplexer connected between said bit timing logic units and said logic unit and selectively connecting the logic unit to one of said bit timing logic units.

15. The CAN module according to claim 14, wherein:

said logic unit whose state is represented by the data stored in said storage elements is connected to said first storage element through said first multiplexer; and

said logic unit is connected to said first bit timing logic unit through said second multiplexer, if, on a part of said first bit timing logic unit, a request for access to said logic unit is present.

16. The CAN module according to claim 14, wherein:

said logic unit whose state is represented by the data stored in said storage elements is connected to said second storage element through said first multiplexer; and

said logic unit is connected to said second bit timing logic unit through said second multiplexer, if, on a part of said second bit timing logic unit, a request to access logic unit is present.

17. The CAN module according to claim 11, wherein possible reactions of said logic unit to requests from said bit timing

logic units are determined in advance and buffer-stored until a relevant request occurs.